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and talo are scarce. At the present time, the island water supply from concrete cisterns is rationed out to the families of the island from July until the first heavy rains.

The seasonal changes, though important for living conditions, have not involved any great seasonal rhythm of labor. Whereas house repairing for the western village is in October and November, that for the eastern village is in April and May, when the steady winds blow from the south and east. There is a tendency to reserve activities centered round the building of new houses and canoes for the cooler midyear months, and at the beginning of this period there is a spurt of building in all villages. Other activities go on throughout the year. Twice each year, depending on the maturity of the plants, all the talo beds on Wale and Motu Ko are fertilized. With the arrival of May and the beginning of the best deep-sea fishing, there is a general repairing of the fishing gear, including canoes, paddles, hooks, fishline, and anchor line. Today there is seasonal activity in copra making, the people from each village going to their respective reserves from March to April, and a second time from August to September.

Water

Water for domestic use was formerly obtained exclusively from seep holes and wells sunk close to the beach above high tide level. This slightly brackish water is still used for bathing and other purposes by all three villages when they visit their reserves and, owing to the distant location of a better supply, by most Yato villagers all the time. Today three concrete cisterns on Wale store water draining from the church and courthouse roofs. This water is used for drinking and washing in the rainy season, in the dry season for drinking only.

Plant Life

The soil of the whole atoll is poor, mostly infertile sand and coral gravel, and in consequence vegetation is sparse. Tropical bush grows luxuriantly in a few sections. Of the food plants, coconuts grow well, but talo and bananas grow only in excavated pits that have been filled with plant material and must be fertilized with leaves and ferns twice each year. As an aid to growth of bananas, old pieces of iron are buried among the roots. A few papaya and limes grow on Motu Kotawa. The kava plant (*Piper methysticum*) does not grow on the atoll. Specimens of all plants growing in Pukapuka, as identified by Marie C. Neal, E. H. Bryan, Jr., and F. Raymond Fosberg, are recorded in the following list:

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Kave (Cassytha filiformis)
Lakau yili (Pemphis acidula)
Laukorewa (Asplenium nidus)
Laupone (Ipomoea grandiflora)
Liwa paniu (a moss) (?)
Maile (Polypodium scolopendria)
Moemoe (Boerhaavia tetrandra)
Mouku (Fimbristylis cymosa variety macrocephala)

Nau (Lepidium bidentoides)
Niu coconut (Cocos nucifera)
Ngangie (Pemphis acidula)
Ngayu (Scaevola frutescens)
Nonu (Morinda citrifolia)
Nuna (Fleurya ruderalis)
Ongoongo (Euphorbia prostrata)
Polapaka (Solanum viride)
Polo (Hedyotis romanzoffiensis)
Puapua (Guettarda speciosa)
Puka (Ceodes umbellifera)
Pukanea (Hernandia ovigera)
Pukaka (Cyrtosperma merkusii)

Pukanea (Jussiaea erecta)
Taeyinu (Tournefortia argentea)
Taumahonako (Achyranthes velutina)
Tiale (Gardenia taitensis)

To, sugar cane (Saccharum officinarum)
Vawai (Triumfetta procumbens)
Vayavaya (? Lepturus repens)
Vayavaya ni (? Cyperus ferax)
Wakanava (Cordia subcordata)
Wala (Pandanus sp.)
Wau (Plumeria velutina)
Wawa, talo (Colocasia antiquorum variety esculenta)
- kele
- kiekie
- lulu
- mawoiawoia
- newunewu
- pelem
- polapola
- pongi

(native varieties of talo)

Welo (Ficus tinctoria)
Wetai (Psilotum nudum)
Wetau (Calophyllum inophyllum)
Wuti (banana) (? Musa sapientum)
- malie
- mitiluki
- polingaka
- talua

(native varieties of banana)

Wutu (Fagraea berteriana)
Yanuti (Suriana maritima)
Yulu (? Pandanus)

Note: Of the plants listed, *pukanea*, *wakanava*, *puapua*, and *wutu* are used for canoes, implements and utensils; *pulo* is used mainly for canoe outriggers; the bark of the *wau* is used for fishline and cordage (termed *wau*) for fishnets. The coconut supplies material for the women's kilt, the man's rough mats, smooth cord for fishlines, catcher lines, and general lashing, also material for rough mats, food platters, baskets, house thatch. It is one of the chief foods of the island. Pandanus is used for mats, for men's mats, today for house thatch. Its wood is valuable for house frameworks, and the ripe fruit is eaten. Pukapukans distinguish in terms of leaf shape two varieties of *Pemphis acidula*: *ngangie* and *lakau yili*. *Ngangie* is the preferred wood for fishhooks, for implements and outrigger connectives, but failing this wood, *lakau yili* is recognized as a valuable substitute. Botanically the two plants appear to be similar. The flower of the *tiale* is used for wreaths and decorations. The bark of the *wala* was formerly used for decorating ceremonial headdresses. *Nawa* makes the red dye used for mat designs. All the creepers such as *moemoe*, *laupone* and *ongoongo*, are used extensively for wreaths and decorations. The one *wutu* tree on the island is reported to have grown from a drift seed.

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The general name for a plant is *lakau*. Root is *aka*. The trunk of a tree is *pu lakau*. A moss or lichen is *liwa*. The fungoid "toadstool" growth on a fallen tree is termed *laulau talinga*. A seed is *uwa*, a flower *pua*, a leaf *lau*. The name of the plant is added to these words to particularize: *uwapuapua* (*puapua* seed), *puanuu* (coconut flower), *akauaka* (aerial root of the pandanus), *launiu* (coconut leaf, leaflet). The seeds of certain trees, however, have distinctive names: *pei*, seed of the *wetau* tree, and *kalaka*, *pukanea* seed. The word *tiale* is used for both plant and flower of that name.

The Pukapukans are intimately familiar with the botany and horticulture of coconut and talo (pp. 81-90).

1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

Canoes are bailed dry and excess moisture is wiped out with wringers of coconut fiber. They are covered with old coconut-leaf mats (*pola*), unplaited dry coconut leaves, and pieces of pandanus matting. This canoe covering is termed *kaukau lama* or *tapola*. Coconut-leaf butts and lengths of timber are leaned against the covering to prevent its blowing away in the wind.

Formerly canoes were never anchored with a cable to prevent them from drifting. A stick, called *iki tauia*, was driven into the sand of the resting place of the canoe just forward of the stern cross boom on the port side of the canoe between the hull and the longitudinal spar. This served to anchor the canoe securely because the top end of the stick projected well above the cross boom.

Cultivation and Harvesting

The vegetable foods of the Pukapukans are limited to coconuts, talo, *puleka*, bananas, and pandanus. Today a few papayas and limes grow on Motu Kotawa. Coconuts and talo were and are the staple vegetable foods; the coconut is immeasurably the more important. All parts of the coconut tree were used for food as well as clothing and sennit; its value led the people to study every phase in growth of fruit and tree. Any Pukapukan can distinguish stages in the growth of the nut by a glance at a tree, however high; and he will climb only that tree which has on it the particular fruit for his purpose.

Coconut

The origin of the coconut is told in the following Pukapukan version of a widespread Polynesian myth.

Manieuli and Maniepopo were a Pukapukan man and wife. Maniepopo conceived a child by her husband and, as is the habit of women at this time and in this condition, she longed for special and strange foods to eat. She had tasted everything that her husband could bring her, but still she longed for other foods. Her husband fished and fished and brought her home his catch, but she refused to eat it, saying, "This fish smells rotten to me. Take it away. I do not like it. Go fishing again and bring me some other fish." So he went fishing again, and this time brought home some sweet fish, fat and delicious. But again his wife refused to eat, saying, "This fish is too sickly sweet. I don't like it." This went on for many days, the husband procuring all kinds of new fish, the wife refusing them all, until he was worn out with his toil, while his wife pined away for food. At last he said to her, "Tell me what kind of fish it is that you long for, and then I will try to bring it to you." She replied, "There is one fish only that I desire and that is a piece of the *tuna* eel."

The man got his bait and hooks and went to the hole of the *tuna*. He baited his hook and threw it into the hole, but the *tuna* would not bite. He tried many kinds of bait fish in turn but with no luck. At last in despair he tried a bait of flowers and leaves, but still the *tuna* would not bite his hook. In the end, when he was about to give up altogether, he thought of his wife sitting at home waiting for him and decided to make one more try. For this last effort he baited his hook with the strong-perfumed

1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

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flower of the *wetea* tree. As he baited his hook and dropped the line into the hole he made this chant: "Manieuli, Maniepopo, ta te matau, e matau lave" [Manieuli, Maniepopo, (we) prepare the hook, the fast-gripping hook]. The *tuna* took the bait and was soon fast fixed to the hook. The man hauled the fish from the hole, and when he was about to club it to death the fish spoke, saying, "Hear my words before you kill me. When I am dead, cut off my head. Let your wife eat my body, but my head you must plant in the ground in front of your house." The man listened well to the words of the *tuna*. Then he killed the fish, cut off its head, and planted it in front of his house. The body he wrapped in leaves, cooked in the oven, and took to his wife. She saw the eel and said, "Here you are at last with just the kind of fish I have been longing for." With these words she ate the fish and was satisfied.

After a time the head grew up into a tree which later bore nuts, one nut on the topmost stem, two nuts on the second stem, three nuts on the third stem, and so on up to ten nuts on the tenth stem. Then later it had twenty stems and on the twentieth were twenty nuts. Finally the tree bore a heavy crop of nuts. As the earliest nuts ripened and became hard, they dropped from the tree to the ground. Manieuli collected all the nuts. Then he had the idea of giving nuts to all the islands in the Pacific. He divided the nuts into two parts; one part for the islands of the western Pacific, the other part for the islands of the eastern Pacific. Then he took one nut at a time from the western pile and threw it into the air. As he threw he called out the name of an island and there the nut landed. When the western pile was finished he started on the eastern pile, throwing a nut into the air as before for each island in the eastern Pacific. In this way all the islands of the Pacific received the coconut. After he had used all the nuts from the tree, he thought, "In this division I have forgotten all about Pukapuka, which is neither east nor west. Te Ulu-o-te-watu has received no nuts from this division." He looked around on the ground and found one very small, dry nut. He held up this nut and said, "This shall be the nut for Pukapuka." Thus in the end all the islands shared in the nuts from the tree that grew from the head of the *tuna* fished by Manieuli.

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After telling this story, informants added that the first nut was planted in the reserve of Uta. It is a characteristic Pukapukan touch to say that Pukapuka received only a wizened nut after almost being left out of the division altogether. In the story of Lata, when Lata divided the huge *Tridacna* shellfish (*peysus*), he forgot Pukapuka in the division and was able to give the island only the rock to which the *peysus* was growing. Similarly Pukapuka was the last Polynesian island to receive Christianity and among the last islands to receive a visit from anthropologists!

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Coconut trees are empirically divided into 17 classes in terms of the bearing qualities of the tree and the shape or quality of the husk:

Niu laktin: produces many nuts that are small but abundant; it sometimes ceases bearing for a long time but usually bears again after this pause.
Niu wasa: bears well and continuously but not abundantly.
Niu tasiti: does not bear well and is not often planted.
Niu kosila: bears well but the nuts show a tendency to fall from the tree before they are mature.
Niu wuakole: a non-bearing tree with male flowers.
Niu malie: bears well and has good eating nuts.
Niu emegalo: bears the sweet eating coconut with edible husk.
Niu laiiki: bears very small nuts.
Niu lasosui: very large nuts.
Niu kawa loloa: nuts with long husks.

1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

245 Niu kawa mumu: nuts with coarse thick husks.
242 Niu kawa lapalapa: nuts with thin husks.
Niu kawa pukupuku: nuts with round husks.
Niu kawa lilliki: nuts that are small and have small husks.
829 Niu kawa pipiki: nuts of which the husks are tough and hard to remove.
[137] Niu mawakiwaki: nuts that are enclosed in a soft husk easily removed.
Niu pulu vem: the best nuts for making sennit.

Coconut trees are also classified in terms of the color of the nut. Six types are recognised:

Niu uli: dark green.
Niu kawa kanakana: pale green.
Niu kawa mclomelo: brownish red.
Niu melo: deep brown, almost red.
Niu mele toto: almost blood-red.
Niu kawa uyhyi: midway between dark and pale green.

Most nuts are self-planted, but when a man wishes to plant one for himself he makes his selection of planting nut in terms of the above empirical classes. Similarly when a boy is sent to gather nuts, the stage of the nut is mentioned or the purpose for which it is desired; and the boy is told to get it from one of the above types of trees. A man is familiar with all the trees that he controls and with most of the trees on the land sections (*kaus*) of his paternal lineage; by giving specific directions to the nut-gatherer, he can always be sure that he receives the nut best suited to the purpose in hand.

245 782 Nuts planted by hand should be planted at the new moon; as the moon grows bigger, so will the tree grow larger and never cease to bear. Trees from nuts planted at the time of the full moon will at first bear well, but in successive bearings the number of nuts will be fewer and fewer, until the tree ceases to bear. Informants say that the young people do not pay attention to this planting rule today; hence the fertility of the coconut trees on the island is slowly waning. Formerly when nuts were planted a simple prayer was said to the god Tamayei, that he make the tree grow well. At the time of the *laukava* food division of the chief, gifts were made to Tamayei to thank him for his assistance in producing fertile trees.

245 A tree that does not grow well is *niu tau makulu*. Only certain trees bear the sweet-husked nut (*niu mangalo*); the majority bear a nut with a bitter husk (*niu hova*). Though he can give no reason for this difference, every man knows which of his trees is a *niu mangalo*. As there are no obvious distinguishing features about the tree or the nut, save that of taste, ability to distinguish a *mangalo* tree is based on experience over a number of years. It is not uncommon to allow coconut trees to grow from nuts planted near the cook houses. These grow into small trees and provide a ready supply of leaves and leaflets for use in making platters, baskets, mats, and mosquito switches.

1: Beaglehole and Beaglehole B-F (1934-5) 1935
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The names for the parts of a coconut tree (niu) are:

Fe niu: trunk.
Lauoho: leaf and leaflets.
Kaumoo: leaf midrib.
Tuaoho: leaflet midrib.
Pukiawe: midrib base.
Kaiawe: fibers from leaf midrib.
Kaho: thorny stipule.

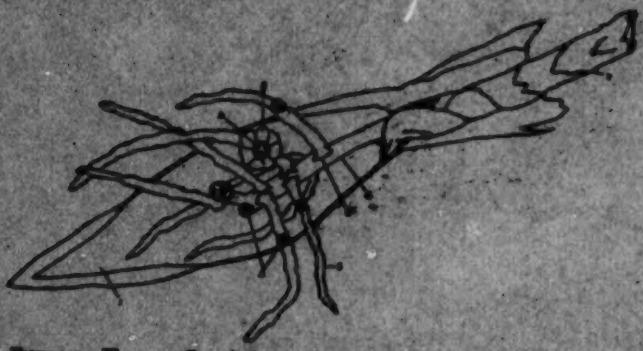

FIGURE 5.—Flower stalk and sheath of coconut tree: 1, flower sheath, mamoe; 2, base of bract, aue; 3, floral bracts, unmodified; 4, flower stalk, kaukauhuaa; 5, base of flower stalk, fa o te kaukauhuaa; 6, flower stem, kaukauhu; 7, base of stem, fa o te kaukauhu.

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Names for spathe and flower stalks are given in figure 5. Informants had no ideas about the reproduction of the coconut nor could they give any names for the sexes of the flowers.

Stages in Growth

Five stages are named in the growth of the tree from the seed nut to the small tree:

Tuoo: the nut sends its roots (akaoio) into the ground, and stem and leaves grow upward.

Aapapao: young stem shoots (ulito) have shot upward to a height of about 6 inches.

Uto: sprouts have grown to a height of about 2.5 feet, and the absorbing organ of the coconut cotyledon (uto) has filled the entire cavity of the nut.

Laulau: the tree has taken firm root in the ground and the leaves have attained a height of 4 to 5 feet.

Yau: the leaves are growing vigorously and the young coconut tree is well established.

The 15 named stages in the growth of the fruit are:

Fue hua: the fertilized female flower of the coconut has developed into a flower bud.

Kota: the immature nut, an inch or more in length. If the flower falls from the tree, it is used in the game of juggling (tikiti hua).

// Beaglehole ∝ Beaglehole E-5 (1934-5) 1938 Pukapuka

245 Wenili: the nut is a little larger than koua and has a dark green husk.

Uvuka: the immature nut has grown still larger but is still not used as food. Children use nuts at this stage as crude dolls.

Moso katia: the husk is well formed; the cavity is filled with a clear fluid which is bitter and undrinkable; no flesh has yet formed. If the husk is flicked with the fingers it gives off a hollow resonance.

262 Mukumukko: a thin, slimy, easily detachable flesh begins to form over the inner surface of the nut. The mukumukko flesh forms inside the mesocarp at the point of attachment of stalk to nut. When the green outer husk is stripped off, the edible husk is exposed—a white, meaty substance around the outside of the eyes. Mukumukko from certain trees (nio mele, nio kuwa kanakana, and nio uyi) is sweeter and more desirable than others. The fluid from the advanced mukumukko nut may be drunk but is more often added to talo puddings.

Nio katikati: the shell is harder, the flesh thicker though still slimy. The liquid ceases to be bitter and may be drunk.

Nio mata motomoto: the drinking nut in its earlier stage. The liquid is not so sweet as in the next stage. The flesh is soft and thick and is eaten after the liquid is drunk. The husk is dry and unfit for food.

Nio mata: drinking nut at its best stage. The liquid is sweet (leka) and the flesh tasty (malie). When this nut is shaken, the liquid inside can not be heard.

Nio mata matua: the nut a little past its best drinking stage. The flesh has become hard, especially about the base of the nut; but the liquid is plentiful and sweet.

Nio kuna: the flesh is thick and hard; there is less fluid. The husk is darker than the nio mata, and the liquid rattles inside the shell when shaken. It is not particularly desired as food, but the liquid is drunk and the flesh eaten if the nut is husked. A nut at this stage is normally allowed to develop into a yakali nut. The flesh is specially used now as pig food.

Nio uli: the husk turns brown; the liquid becomes slightly bitter and the flesh hard. The embryo develops.

[258] Nio papaku (modern name, yakali): The flesh (ipiipi) is mature, thick, and hard. Liquid is bitter and unfit to drink. The embryo has developed into an absorbing organ. This is the stage used in copra making. The ipiipi flesh is eaten with fish or other foods in the absence of talo; from it coconut cream (lolo) is made.

Uto: the yakali nut left on the ground to germinate becomes filled with the spongy absorbing organ (uto). The liquid is absorbed and the flesh (ipiipi) is very thin or entirely absorbed. Leaves, stem, and roots develop. The uto is an important everyday food.

Takataka: stored yakali nuts. The embryo is undeveloped; the flesh thick, hard, and sweet; there is no fluid. After 6 months' storage, when the nut is dry but the flesh still fairly soft, the nuts are said to be manuya. After a year the flesh changes its color from white to yellow-brown and the nut is described as koa ata (coloring). After 3 years the flesh is brown or red and the nut is described as koa kula (red-brown). The flesh is eaten by itself or as a food complement (ideaki) to pandanus fruit or edible mukumukko. It is also used in the preparation of coconut oil.

257 *Takataka* nuts are stored on the high platform of a storage house (*uale takataka*) in one of two ways:

In the first method the *yakali* nuts may be left unhusked (*nui kuna*) so that rats can not bite through the husk to the flesh within. The drying process hardens and strengthens the husk fibers which are later soaked in salt water and used to make sennit. By the second storage method the *yakali* nuts are husked and a piece of *fungo* coral of appropriate size is driven into each eye of the nut, effectively closing the eyes so that rats cannot gnaw through the shell. Nuts are stored for five years or more

1:Beaglehole and Beaglehole E-3 (1934-5)1938 Pukapukans

TOYS AND SPORTS EQUIPMENT

524 Pukapukan children are clever at making original toys from coconut
824 leaflets. Coconut leaflet toys, made by children according to the techniques
171 described for Aitutaki (26, pp. 318-322), include the leaflet Jew's harp (*viva*), the windmill (*poteka launiu*), the leaflet bull roarer (*mahatangitangi*), and the leaflet spinner (*mahaki matangi* or *auti lole launiu*). Whereas the Aitutakian spinner is made with a collar and suspended with a banana leaf fiber (26, p. 321), the Pukapukan spinner is closed by skewering the two leaflet ends together with a piece of coconut leaflet and is suspended by a strand of human hair knotted to a thin length of coconut midrib.

A trick figure made from a strip of dried coconut leaflet is termed *te tiaugo a Maui* (fig. 49,*b*), because the gods gave this figure to Maui to see if he could disengage the two leaflet sections when they were testing out the culture hero. Children and adults spend much time trying to solve the puzzle, without success however, for the solution, if ever there was one, is now lost.

A coconut-leaflet trumpet (*pu launiu*) is made by Pukapukan children. Leaflet midribs are stripped from eight or more coconut leaflets:

> The leaflets are rolled spirally into the shape of a cone, successive leaflets being added by overlapping the ends. When a trumpet of suitable size has been made, the free end of the last leaflet is skewered to turns underneath with a small fishbone or splinter of wood. A reed made by doubling a piece of leaflet along the medial transverse line is inserted into the mouthpiece of the trumpet.

A favorite toy made during our stay was leaflet spectacles which children perched on their noses, pretending they improved their sight.

524 Two types of ball are in use: one is a round ball made of *nukunuku*
171 wood used in cricket; the other is a somewhat square object made by covering a stone with plaited check cocoanut leaf. Both balls are termed *bolo*, a name presumably derived from the English word "ball". Either the old name for the ball has been forgotten, or the ball is an introduced toy.

Coconut-cup shoes (*tui ngaipu*) are made by threading a length of pandanus or sennit through the eye of a half coconut shell. The foot is placed on the shell and the cord passes to the hand between the big and second toes.
526 Children wear these shoes today for sport, but informants said that formerly
527 adults occasionally held coconut-cup foot races during the time of merry-
177 making that introduced the six months of pleasure.

Wooden stilts (*lolo*), said to be introduced, are sometimes used by children.
524 The toy bow (*uana*) and arrow (*li*) made from coconut-leaflet midribs is an introduced toy. Marbles were also unknown formerly, but today children use as marbles (*fusi*) seeds from the *awtau* tree.

1:Beaglehole and Beaglehole E-5 (1934-5) 1938 Pukapukans

845 with physical treatment. Formerly, a medicine man (*tangata pola*) was consulted. He diagnosed the case, then went to his god house, performed the pigeon-calling *lupe* ritual to his god, and received from the god advice on the treatment of the trouble. The god's advice seems to have been of a stereotyped nature, the suggestion that the medicine man return to the mother and give her several smart slaps (*papakinga*) in the small of the back at frequent intervals. Today this procedure is followed as of rote. The parturient woman is not allowed to swim, but she is encouraged by her attendants to get up and walk about in the hope that the gentle exercise will encourage delivery. If this has no effect, *niu kalohalo* is prepared and given to the mother to drink: the grated flesh of a young nut is mixed with the liquid of the nut. The patient drinks about one pint at a time, repeating the dose at intervals if necessary. This medicine (*lakau*) is considered slightly laxative and is also supposed to cool the blood. Another recommended medicine, also taken at intervals, is coconut cream mixed with the expressed juice of pandanus keys. No other method is known to hasten delivery or ease the pain. Neither chants nor genealogies were recited to assist delivery.

844 Pukapukan theory is that children born during the night come out head first, and those born during the day come out feet first, in spite of the efforts of attendants to change the position of the child. No explanation could be offered for the case of a child recently born during the day with its head first. A day-born child is reputed to have a short expectation of life, it is likely to die even before it starts to walk. Apela, a young man rapidly making a name for himself as a baby specialist, was in attendance at the birth of a child one afternoon, the third to be born to the parturient woman, the first children having been still-born. Labor was not prolonged. After one *hokononga* (exertion of pressure) attendants saw the infant's head appear. The child did not come out. Five minutes later, the head again appeared, but still the baby did not come. After a further ten minutes of labor, the child appeared feet first, and was thus delivered. Apela plainly felt that the child would not survive infancy, because of its inauspicious introduction to the world.

845 It is related that formerly the birth of a child later to become a man of supernormal strength, caused the death of the mother. The child sprang from the womb with such force as to injure fatally the mother's internal organs. Thus were born Wata-manavanui (p. 379), Kui, and some of Kui's descendants (1).

773 When the child has been delivered, the blood is massaged into the cord (*pito*) and along the cord to the navel (*pito*) of the child. Without waiting for the expression of

844 the placenta (*uowua*), the cord is then cut (*hokoti*) by the male attendant or the father with a sharp *tuluyi* shell about 5 or 6 inches from the umbilicus, in no prescribed manner. A slip noose is made in a short length of sennit fiber (*pulu hawa*), slipped over the end of the cord, and passed to a point about 2 inches from the distal end. The cord is not folded back. The noose is pulled tight and knotted with half hitches.

The placenta usually comes away almost immediately without any difficulty. Mrs. Henry reports no failure in the expulsion of the placenta during the seven years she has been in Pukapuka. But should the expulsion of the placenta be delayed even as much as one half hour the parents confess to attendants any sins they have committed. Confession procures immediate expulsion.

844 The placenta falls into a hole (*lua*) previously dug beneath the mother. Placenta and cord are immediately taken by an attendant to a section of the beach owned by the

834 father's paternal lineage and buried in the ground. Clothes badly soiled in parturition may also be buried in the same hole. A *puapua* tree (later to be used for a canoe), a *pulu* tree (the leaves to be used later for taro fertilizer), or a coconut tree is planted over the hole. Such a tree is referred to as *te uowua o Mea* (the afterbirth of Sand-so). But informants suggested no connection between the life of the tree and the

844 life of the child.

The parturient blood (*toto*) is tapu. It is allowed to drop into the hole under the mother which is finally covered with sand but not concealed in any other way. No rationalization could be obtained for the belief that the blood is tapu, nor were any con-

2: Macgregor E-2 (1933) 1935 Pukapukans
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[Information in this source which is either inadequate, incorrect or duplication has only been filed in category 116; for list of plants and their cultural uses, see p. 6.]